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PATENT
Attorney Docket No.: 18564-003610

On 4-1-03

TOWNSEND and TOWNSEND and CREW LLP

By: Linda Sheffer

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Steven A. Sunshine et al.

Application No.: 09/596,169

Filed: June 16, 2000

For: MULTIPLE SENSING SYSTEM
AND DEVICE

Examiner: Carol S.W. Tsai

Art Unit: 2857

REQUEST FOR RECONSIDERATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action mailed December 2, 2002, reconsideration of the present application is respectfully requested in light of the following remarks. A petition for a one-month extension of time accompanies this response.

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MSH

1 1. (Previously amended) A distributed sensing system in a networked
2 environment for identifying an analyte, said system comprising:
3 a first sensor array connected to said network comprising sensors capable
4 of producing a first response in the presence of a chemical stimulus;
5 a second sensor array connected to said network comprising sensors
6 capable of producing a second response in the presence of a physical stimulus;
7 a computer connected to said network;
8 a computer readable algorithm for execution by said computer for
9 identifying said analyte, said computer readable algorithm comprising
10 instructions for comparing said first response and said second
11 response with a known response, and
12 instructions for identifying an unknown analyte.

1 2. (Original) The system according to claim 1, wherein said algorithm
2 selects the most relevant sensor modality in said first and said second array to identify
3 said analyte.

1 3. (Original) The system according to claim 1, wherein each sensor of
2 said first sensor array is a member selected from the group consisting of a bulk
3 conducting polymer film, a semiconducting polymer sensor, a surface acoustic wave
4 device, a fiber optic micromirror, a quartz crystal microbalance, a
5 conducting/nonconducting regions sensor, a dye impregnated polymeric coatings on
6 optical fiber and combinations thereof.

1 4. (Original) The system according to claim 1, wherein each sensor of
2 said second sensor array is a member selected from the group consisting of an optical
3 sensor, a mechanical sensor, a radiation sensor, a thermal sensor and combinations
4 thereof.

1 5. (Original) The system according to claim 3, wherein each sensor of
2 said first sensor array is a conducting/nonconducting regions sensor.

1 6. (Original) The system according to claim 4, wherein each sensor of
2 said second sensor array is an optical sensor, a mechanical sensor, a radiation sensor, a
3 thermal sensor and combinations thereof.

1 7. (Original) The system according to claim 1, wherein the transmission
2 of said first response is conducted via wired communications.

1 8. (Original) The system according to claim 1, wherein the transmission
2 of said first response is conducted via wireless communications.

1 9. (Original) The system according to claim 8, wherein said wireless
2 communications are implemented using communications technologies selected from a
3 member of a group consisting of infrared technology, satellite technology, microwave
4 technology and radio wave technology.

1 10. (Original) The system according to claim 1, wherein said networked
2 environment is a member selected from the group consisting of a worldwide computer
3 network, an internet, the Internet, a wide area network, a local area network, an intranet
4 and combinations thereof.

1 11. (Original) The system according to claim 1, wherein said networked
2 environment is the Internet.

12-18. Withdrawn.

1 19. (Previously amended) A method for transferring a combination of
2 chemical and physical data over a computer network for identification of an analyte, said
3 method comprising:

4 transmitting sensory data from a first sensor array comprising sensors
5 capable of producing a first response in the presence of a chemical stimulus to a remote
6 location;
7 transmitting physical data from a second sensor array comprising sensors
8 capable of producing a second response in the presence of a physical stimulus to a remote
9 location; and
10 processing said sensory and physical data at said remote location for
11 identification of an analyte, wherein said processing comprises
12 comparing said first response and said second response with a
13 known response, and
14 identifying an unknown analyte.

1 20. (Original) The method according to claim 19, further comprising
2 employing a sensor selection algorithm to determine sensors in said first array.

1 21. (Original) The method according to claim 19, wherein each sensor of
2 said first sensor array is a member selected from the group consisting of a bulk
3 conducting polymer film, a semiconducting polymer sensor, a surface acoustic wave
4 device, a fiber optic micromirror, a quartz crystal microbalance, a
5 conducting/nonconducting regions sensor, a dye impregnated polymeric coatings on
6 optical fiber and combinations thereof.

1 22. (Original) The method according to claim 19, wherein each sensor of
2 said second sensor array is a member selected from the group consisting of an optical
3 sensor, a mechanical sensor, a radiation sensor, a thermal sensor and combinations
4 thereof.

1 23. (Previously amended) A distributed sensing system in a networked
2 environment for identifying an analyte, said system comprising:

3 a first sensor array connected to said network comprising sensors capable
4 of producing a first response in the presence of a chemical stimulus, wherein said first
5 sensor is connected with said network via a wireless connection;

6 a second sensor array connected to said network comprising sensors
7 capable of producing a second response in the presence of a physical stimulus;

8 a computer connected to said network;

9 computer readable instructions for execution by said computer for
10 identifying said analyte, said computer readable instructions comprising

11 instructions for comparing said first response and said second
12 response with a known response, and

13 instructions for identifying an unknown analyte.

1 24. (Previously amended) A distributed sensing system in a networked
2 environment for identifying an analyte, said system comprising:

3 a first sensor array connected to said network comprising sensors capable
4 of producing a first response in the presence of a chemical stimulus;

5 a second sensor array connected to said network comprising sensors
6 capable of producing a second response in the presence of a physical stimulus, wherein
7 one of said sensors in said second sensor array is an infrared sensor;

8 a computer connected to said network;

9 computer readable instructions for execution by said computer for
10 identifying said analyte, said computer readable instructions comprising

11 instructions for comparing said first response and said second
12 response with a known response, and

13 instructions for identifying an unknown analyte.

1 25. (Previously amended) A distributed sensing system in a networked
2 environment for identifying an analyte, said system comprising:

3 a first sensor array connected to said network comprising sensors capable
4 of producing a first response in the presence of a chemical stimulus, wherein said first
5 sensor is connected with said network via a wireless connection;
6 a second sensor array connected to said network comprising sensors
7 capable of producing a second response in the presence of a physical stimulus, wherein
8 one of said sensors in said second sensor array is an infrared sensor;
9 a computer connected to said network;
10 computer readable instructions for execution by said computer for
11 identifying said analyte, said computer readable instructions comprising
12 instructions for comparing said first response and said second
13 response with a known response, and
14 instructions for identifying an unknown analyte.